

CLAIMS

What is claimed is:

1. A wireless communications system comprising:
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at least one transceiver unit adapted to communicate over an air interface with
portable communications devices and adapted to communicate over an
undedicated public network; and
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an access network unit adapted to communicate with the at least one
transceiver unit over the public network.
2. The system, as set forth in claim 1, wherein the public network
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comprises the internet.
3. The system, as set forth in claim 1, wherein the at least one transceiver
unit comprises at least one antenna to facilitate communications over the air interface.
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4. The system, as set forth in claim 3, wherein the at least one transceiver
unit comprises a structure on which the antenna resides.

5. The system, as set forth in claim 4, wherein the structure comprises a tower.

5 6. The system, as set forth in claim 4, wherein the structure comprises a building.

7. The system, as set forth in claim 1, comprising at least one portable
10 communications device.

8. The system, as set forth in claim 7, wherein the at least one portable
communications device comprises a cellular telephone.

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9. The system, as set forth in claim 7, wherein the at least one portable
communications device comprises a vehicle having at least one of a mobile telephone
and a navigation system.

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10. The system, as set forth in claim 7, wherein the at least one portable
communications device comprises a computer having a wireless modem.

11. The system, as set forth in claim 1, comprising a satellite system adapted to facilitate communications between the at least one transceiver unit and the access network unit.

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12. The system, as set forth in claim 1, comprising a services network communicatively coupled to the access network unit.

10 13. The system, as set forth in claim 12, wherein the services network comprises a mobile switching center.

14. The system, as set forth in claim 12, wherein the services network
15 comprises a publicly switched telephone network.

15. An access network unit for use with a wireless communications system, the access network unit comprising:

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a communication interface to facilitate communication between the access network unit and at least one transceiver unit over an undedicated public network.

16. The access network unit, as set forth in claim 15, wherein the communication interface comprises at least one protocol layer.

5 17. The access network unit, as set forth in claim 16, wherein the at least one protocol layer maintains an IP address of the at least one transceiver unit.

10 18. The access network unit, as set forth in claim 16, wherein the at least one protocol layer maps an IP address of the at least one transceiver unit to a communications technology supported by the at least one transceiver unit to facilitate transfer of information dependent upon such communications technology to the at least one transceiver unit.

15 19. The access network unit, as set forth in claim 16, wherein the at least one protocol layer provides security information to the at least one transceiver unit to facilitate secure communication over the public network.

20 20. The access network unit, as set forth in claim 16, wherein the at least one protocol layer negotiates quality of service for communications with the at least one transceiver unit over the public network.

21. The access network unit, as set forth in claim 16, wherein the at least one protocol layer encapsulates higher layer protocol information to facilitate protocol requirements of the public network.

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22. The access network unit, as set forth in claim 15, wherein the public network comprises the internet.

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23. The access network unit, as set forth in claim 15, wherein the access network unit comprises:

a transceiver server adapted to communicate with the at least one transceiver unit over the public network; and

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an access network controller adapted to communicate with the transceiver server and with a services network.

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24. The access network unit, as set forth in claim 23, comprising at least one protocol layer between the transceiver server and the access network controller.

25. The access network unit, as set forth in claim 24, wherein the at least one protocol layer provides connectivity for network elements based on communications technology.

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26. The access network unit, as set forth in claim 24, wherein the at least one protocol layer facilitates communication between the transceiver server and the access network controller.

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27. The access network unit, as set forth in claim 23, wherein the access network controller provides information processing and control functions for the access network unit.

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28. A method of communicating in a wireless communications system, the method comprising the act of:

communicating information over an undedicated public network between at

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least one transceiver unit, which is adapted to communicate over an air interface with portable communications devices, and an access network unit, which is adapted to process information communicated with the at least one transceiver unit.

29. The method, as set forth in claim 28, wherein the act of communicating information of an undedicated public network comprises the act of communication information over the internet.

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30. The method, as set forth in claim 28, wherein the act of communicating information of an undedicated public network comprises the act of using at least one protocol layer adapted to facilitate communication over the public network.

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